UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,821	08/09/2006	David K. Roberts	GB040038	6739

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)	
Office Action Summary	10/597,821	ROBERTS, DAVID K.	
	Examiner	Art Unit	
	BRYAN WRIGHT	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7,9 and 11-13</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7,9 and 11-13</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This action in response to application August 9, 2006. Claims (1-7, 9, 11-13) are

pending.

Priority

2.   Applicant's claim for benefit of foreign priority under 35 U.S.C. 119 (a) - (d) is

acknowledged.

The application is filed on August 9, 2006 but is a 371 case of PCT/JP03/06585

application filed 02/8/2005 and has a foreign priority application UNITED KINGDOM

0403331.2 filed on 02/14/2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-7, 9, 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by

Rhoads (US Patent No. 6,700,990).

4.   As to claim 1, Rhoades teaches a **method of detecting a watermark in an**

information signal, comprising:

deriving (i.e., resampling and aligning) **a set of correlation results (64) by**

correlating the information signal with a watermark (Wi) for each of a plurality of

relative positions of the information signal with respect to the watermark (i.e.,

suspected signal) (i.e., ..teaches a identification process on the suspected signal begins

by resampling and aligning the suspected signal onto the digital format and extent of the

original signal [col. 7, lines 15-20] ... further teaches doing a local cross-correlation

between the masked difference image and the masked individual embedded image [col.

11, lines 35-45]);

calculating a metric (i.e., local hiding potential) **which is based on a cluster**

(102) (i.e., vector) **of the results (64) selected from the overall set of results** (i.e.,

...teaches two resultant vectors are calculated [col. 78, lines 30-35]) ... further teaches

local hiding potential can be calculated only based on a 3 by 3 neighborhood of pixels

[col. 93, lines 5-10]);

and comparing the calculated metric (i.e., difference signal) **with a cluster**

threshold value (h) which is indicative of the cluster (102) representing a

correlation peak (i.e., ... teaches a newly matched pair then has the original signal

subtracted from the normalized suspect signal to produce a difference signal. ...

teaches difference signal is then cross-correlated with each of the N individual

embedded code signals and the peak cross-correlation value recorded [col. 7, lines 50-

60]).

5.   As to claim 2, Rhoades teaches a **method where the metric** (i.e., scale factor)

is calculated for a plurality of different clusters selected from the overall set of

results (64) (i.e., .. teaches higher derivatives of the acquired image and the embedded

codes are estimated and removed from the calculated scale factor [col. 16, lines 1-10]

As to claim 3, Rhoades teaches a **method where the metric is calculated for a**

cluster of results centred on each I correlation result in the set of correlation

results (64) (i.e., ...teaches two resultant vectors are calculated [col. 78, lines 30-35]) ...

further teaches local hiding potential can be calculated only based on a 3 by 3

neighborhood of pixels [col. 93, lines 5-10]).

6.   As to claim 4, Rhoades teaches **a method where the metric is the mean**

square value of the cluster (102) of correlation results (i.e., ... teaches a measure in

a root mean square [col. 5, lines 15-20]).

7.   As to claim 5, Rhoades teaches a **method where the cluster threshold value**

varies according to the size of the cluster (102) (i.e., .. teaches visually detect any

areas which have been significantly altered wherein the value of the normalized

amplitude dips below some statistically set threshold based purely on typical noise and

corruption (error) [col. 16, lines 30-35] ... further teaches an absolute value of a

difference signal derivative value exceeds some threshold [, then it is replaced simply

by that threshold value [col. 39, lines 35-45]).

8.   As to claim 6, Rhoades teaches a **method according to any one of the**

preceding claimsclaim 1 further comprising an initial step of identifying at least

one cluster of correlation results which are likely to represent a correlation peak

and only performing the step of calculating the metric on each of the identified

clusters [fig. 14].

        As to claim 7, Rhoades teaches a **method according to claim 6 wherein the**

step of identifying clusters of correlation results comprises determining all

correlation results in the set which exceed a detection threshold value and then

determining which of those correlation results are located within a predetermined

distance of each other (i.e., .. teaches Detection of these peaks can be effected by

setting some threshold on the normalized values [col. 78, lines 35-45] ... further teaches

integrating their total along the whole radial line [col. 78, lines 35 -45])

9.   8. (canceled)

10.   As to claim 9, Rhoades teaches a **watermark detector for detecting a**

watermark in an information signal, comprising:

means for deriving a set of correlation results (64) by correlating the

information signal with a watermark (Wi) (i.e., known embedded signal) **for each of**

a plurality of relative positions of the information signal with respect to the

watermark (i.e., known embedded signal) [fig. 14]**;**

means for calculating a metric based on a cluster (102) of the results

selected from the overall set of results (64) [fig. 14];

and means for comparing (i.e., integrating) **the calculated metric with a**

cluster threshold value (h) which is indicative of the cluster representing a

correlation peak (i.e., .. teaches Detection of these peaks can be effected by setting

some threshold on the normalized values [col. 78, lines 35-45] ... further teaches

integrating their total along the whole radial line [col. 78, lines 35 -45})

11.   10. (canceled)

12.   As to claim 11, Rhoades teaches a **watermark detector where the means for**

deriving a set of correlation results, the means for calculating a metric and the

means for comparing the calculated metric comprise a processor which is

arranged to execute software for performing those functions (i.e., ... teaches In

such systems, a memory stores data from the detector, and a processor (e.g. a Pentium

microprocessor with associated support components) can be used to process the

memory data to detect the presence of encoded data [col. 81, lines 1-10]).

13.   As to claim 12, Rhoades teaches a a**pparatus for presenting an information

signal comprising means for disabling operation of the apparatus in dependence

on the presence of a valid watermark in the information signal, wherein the

apparatus comprises a watermark detector** (i.e., ...teaches other applications [col.

97, lines 60-65] ... further teaches a television receivers, internet surfing software, etc.,

can discern such appropriateness ratings (e.g. by use of universal code decoding) and

can take appropriate action (e.g. not permitting viewing of an image or video, or play-

back of an audio source [col. 98, lines 5-15]).

14.   As to claim 13, Rhoades teaches a **watermark detector for detecting a

watermark in an information signal, comprising:**

        **a processor for deriving a set of correlation results by correlating the

information signal with a watermark for each of a plurality of relative positions of

the information signal with respect to the watermark In such systems, a memory

stores data from the detector, and a processor** (e.g. a Pentium microprocessor with

associated support components) can be used to process the memory data to detect the

presence of encoding [col. 81, lines 1-10] and [col. 80, lines 35-55]);

        **said processor calculating a metric based on a cluster of the results

selected from the overall set of results; said processor further comparing the

calculated metric with a cluster threshold value which is indicative of the cluster

representing a correlation peak** (e.g. a Pentium microprocessor with associated

support components) can be used to process the memory data to detect the presence

of encoding [col. 81, lines 1-10] and [col. 80, lines 35-55]).

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BRYAN WRIGHT whose telephone number is (571)270-

3826. The examiner can normally be reached on 8:30 am - 5:30 pm Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, AYAZ Sheikh can be reached on (571)272-3795. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRYAN WRIGHT/
Examiner, Art Unit 2131

/Christopher A. Revak/
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